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特許協力条約に基づいて公開された国際出願

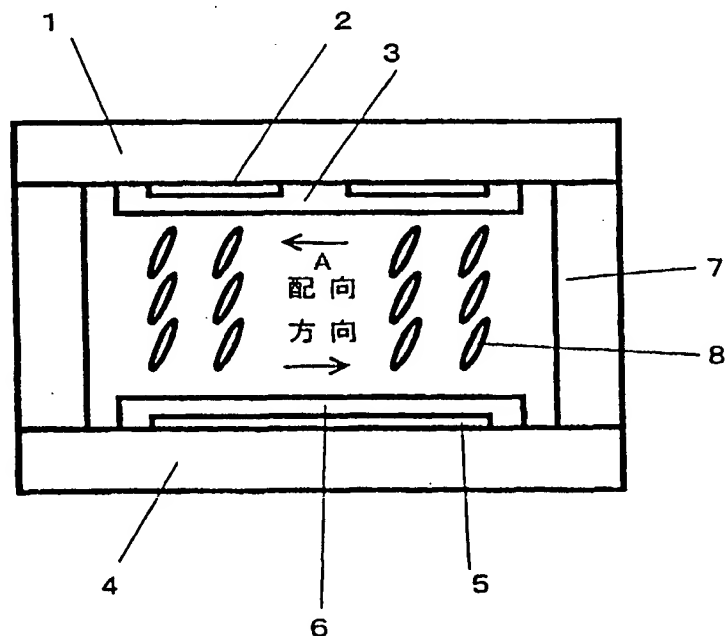
<p>(51) 国際特許分類7 G02F 1/1337</p>	<p>A1</p>	<p>(11) 国際公開番号 WO00/52522</p> <p>(43) 国際公開日 2000年9月8日(08.09.00)</p>
<p>(21) 国際出願番号 PCT/JP00/01209</p> <p>(22) 国際出願日 2000年3月1日(01.03.00)</p> <p>(30) 優先権データ 特願平11/54602 1999年3月2日(02.03.99) JP</p> <p>(71) 出願人 (米国を除くすべての指定国について) セイコーインスツルメンツ株式会社 (SEIKO INSTRUMENTS INC.)[JP/JP] 〒261-8507 千葉県千葉市美浜区中瀬1丁目8番地 Chiba, (JP)</p> <p>(72) 発明者 ; および (75) 発明者 / 出願人 (米国についてのみ) 杉野谷充(SUGINOYA, Mitsuru)[JP/JP] 〒261-8507 千葉県千葉市美浜区中瀬1丁目8番地 セイコーインスツルメンツ株式会社内 Chiba, (JP)</p> <p>(74) 代理人 林敬之助(HAYASHI, Keinosuke) 〒270-2252 千葉県松戸市千駄堀1493 Chiba, (JP)</p>		<p>(81) 指定国 CN, JP, KR, US, 欧州特許 (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE)</p> <p>添付公開書類 国際調査報告書</p>

(54)Title: METHOD OF MANUFACTURING LIQUID CRYSTAL DISPLAY

(54)発明の名称 液晶表示装置の製造方法

(57) Abstract

A method of manufacturing a liquid crystal display having a polymer substrate, forming an alignment film in successive steps. Irrespective of the characteristic specifications of the liquid crystal display, in order that the rubbing direction may be constant, a vertical alignment processing of an alignment film (3) of the liquid crystal display is performed using a vertical alignment agent of a polyimide polymer. It is possible to perform a formation step (printing and hardening processes) of forming the vertical alignment agent while the polymer substrate is consecutively moved along its length and to perform an alignment step of rubbing the polymer substrate in a constant direction parallel to the length. Therefore the method of manufacturing a liquid crystal having a polymer substrate without tooling change for changing the rubbing direction is provided.



A ... ALIGNMENT DIRECTION

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP00/01209

## A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl<sup>7</sup> G02F1/1337

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl<sup>7</sup> G02F1/1337 G02F1/13

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho 1922-1996  
Kokai Jitsuyo Shinan Koho 1971-2000

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP, 58-38926, A (Canon Inc.), 07 March, 1983 (07.03.83) (Family: none)	1, 10
Y		2-9
Y	JP, 63-2019, A (Matsushita Electric Ind. Co., Ltd.), 07 January, 1988 (07.01.88) (Family: none)	2, 4-7, 9
Y	EP, 788012, A (STANLEY ELECTRIC CO.LTD.), 06 August, 1997 (06.08.97) & JP, 9-211468, A & US, 5912717, A	3, 8

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

- \* Special categories of cited documents:
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- "E" earlier document but published on or after the international filing date
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- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

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- "&" document member of the same patent family

Date of the actual completion of the international search  
29 May, 2000 (29.05.00)

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13.06.00

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